IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF TENNESSEE
Nashville Division

L.W., by and through her parents and next friends, Samantha Williams and Brian Williams, *et al.*, *Plaintiffs*, *v.* JONATHAN SKRMETTI, in his official capacity as the Tennessee Attorney General and Reporter, et al., *Defendants*.	**Civil No.** 3;23-cv-00376

EXPERT DECLARATION OF DEANNA ADKINS, MD

1. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

2. The purpose of this declaration is to provide my expert opinions on: (1) the clinical practice and impact of the widely-accepted and evidence-based treatment protocols for transgender adolescents with gender dysphoria including the provision of pubertal suppression treatment and hormone therapy; and (2) the severe risk of harm to adolescents with gender dysphoria of withholding or withdrawing this medical treatment where such treatment is medically necessary.

3. I have actual knowledge of the matters stated in this declaration, and have collected and cite to relevant literature concerning the issues that arise in this litigation in the body of the declaration.

4. In preparing this declaration, I reviewed Tennessee Senate Bill 1 (hereinafter "medical care ban"), as well as materials cited here within. I also relied on my scientific education and training, my research experience, my knowledge of the scientific literature in the pertinent fields, and my clinical experience treating adolescents with gender dysphoria, as set out in my curriculum vitae (Exhibit A).

5. The materials I have relied upon in preparing this declaration are the same types of materials that experts in my field regularly rely upon when forming opinions on these subjects.

6. I may wish to supplement these opinions or the bases for them as a result of new scientific research or publications or in response to statements and issues that may arise in my area of expertise.

BACKGROUND AND QUALIFICATIONS

7. I received my medical degree from the Medical College of Georgia in 1997. I served as the Fellowship Program Director of Pediatric Endocrinology at Duke University School of Medicine for 18 years and I am currently the Director of the Duke Center for Child and Adolescent Gender Care and Clinical Director of the Duke Gender Health and Wellness Program.

8. I have been licensed to practice medicine in the state of North Carolina since 2001.

9. I have extensive experience working with children with endocrine disorders, and I am an expert in the treatment of children with intersex traits, also known as differences or disorders of sex development, and in the treatment of adolescents with gender dysphoria. I have been treating patients with gender dysphoria since 2013.

10. I am a member of the American Academy of Pediatrics, the North Carolina Pediatric Society, the Pediatric Endocrine Society, and The Endocrine Society. I am also a member of the World Professional Association for Transgender Health ("WPATH"), the leading association of medical and mental health professionals in the treatment of transgender individuals.

11. I am the founder of the Duke Center for Child and Adolescent Gender Care (the "Duke Gender Care Clinic"), which opened in 2015. I currently serve as the director of the clinic. The Duke Gender Care Clinic sees patients between ages 5 and 22 with gender dysphoria and patients from birth to age 22 with differences or disorders of sex development ("DSDs"). I have been caring for these individuals in my routine practice for many years prior to opening the clinic.

12. I have treated approximately 745 transgender and intersex young people from North Carolina and across the Southeast at the Duke Gender Care Clinic.

13. As part of my practice, I stay familiar with the latest medical science and treatment protocols related to DSDs and gender dysphoria.

14. In the past six years, I was deposed and testified at trial as an expert in two cases: *Adams* v. *The School Board of St. Johns Cty., Florida*, No. 3:17-cv-00739-TJC-JBT, (M.D. Fla. Oct 1, 2017) and *Brandt et al. v. Rutledge, et al*., No. 21-CV-450 (D. Ark. 2021). I was also deposed in *B.P.J. v. W. Va. State Bd. of Ed.*, No. 2:21-cv-00316 (S.D. W. Va. 2021).

15. I am being compensated at an hourly rate of $250 per hour for preparation of expert declarations and reports, and $400 per hour for time spent preparing for or giving deposition or trial testimony. My compensation does not depend on the outcome of this

litigation, the opinions I express, or the testimony I provide.

GENDER IDENTITY AND GENDER DYSPHORIA

15. A person's gender identity refers to a person's core understanding of belonging to a particular gender.

16. Although the precise origin of gender identity is unknown, a person's gender identity is a fundamental aspect of human development and there is a general medical consensus that there are significant biological roots to gender identity.

17. Everyone has a gender identity.

18. Most people have a gender identity that aligns with the sex they are designated at birth based on their external genitalia.[1] People whose sex designated at birth aligns with their gender identity are cisgender.

19. A transgender person is someone who has a gender identity that differs from the person's sex designated at birth.

20. A person's gender identity (regardless of whether they are transgender or cisgender) cannot be changed voluntarily or by external forces, and is not undermined or altered by the existence of other sex-related characteristics that do not align with it.[2]

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[1] The terms "sex designated at birth" or "sex assigned at birth" are more precise than the term "biological sex" because all of the physiological aspects of a person's sex are not always aligned with each other. For example, some people with intersex characteristics may have chromosomes typically associated with males but genitalia typically associated with females. See *Hembree WC, et al.* Endocrine treatment of gender-dysphoria/gender incongruent persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 2017; 102: 3869–3903, 3875, https://academic.oup.com/jcem/article/102/11/3869/4157558 (hereafter "Endocrine Guideline") ("Biological sex, biological male or female: These terms refer to physical aspects of maleness and femaleness. As these may not be in line with each other (e.g., a person with XY chromosomes may have female-appearing genitalia), the terms biological sex and biological male or female are imprecise and should be avoided.").

[2] Endocrine Guideline at 3874.

21. In the American Psychiatric Association's Diagnostic & Statistical Manual of Mental Disorders ("DSM V"), "gender dysphoria" is the diagnostic term for the condition where clinically significant distress results from the lack of congruence between a person's gender identity and the sex they were designated at birth. In order to be diagnosed with gender dysphoria, the incongruence must have persisted for at least six months and be accompanied by clinically significant distress or impairment in social, occupational, or other important areas of functioning. There are two separate diagnoses for gender dysphoria, one for gender dysphoria in childhood and the other for gender dysphoria in adolescence and adulthood.

22. Being transgender is not itself a mental disorder or a medical condition to be cured. But gender dysphoria is a serious medical condition that, if left untreated, can result in severe anxiety and depression, self-harm, and suicidality.[3]

23. Before receiving treatment, many individuals with gender dysphoria have high rates of anxiety, depression and suicidal ideation. I have seen in my patients that without appropriate treatment this distress impacts every aspect of life.

TREATMENT PROTOCOLS FOR GENDER DYSPHORIA

24. When appropriately treated, gender dysphoria can be effectively managed. I currently treat hundreds of transgender patients. All of my patients who have received medical treatment for gender dysphoria have benefitted from clinically appropriate treatment.

[3] Spack NP, Edwards-Leeper L, Feldmain HA, et al. Children and adolescents with gender identity disorder referred to a pediatric medical center. *Pediatrics*. 2012; 129(3):418-425. Olson KR, Durwood L, DeMeules M, McLaughlin KA. Mental health of transgender children who are supported in their identities. *Pediatrics*. 2016; 137:1-8.

25. The Endocrine Society and WPATH have published widely accepted guidelines for treating gender dysphoria, which are based on scientific research and clinical experience and represent the best evidence-based practice guidelines available for treating this condition: (i) The WPATH Standards of Care for the Health of Transgender and Gender Diverse People, Version 8 (SOC 8),[4] and (ii) the Endocrine Society Clinical Practice Guideline for Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons (the "Endocrine Society Guideline").[5] These guidelines have been endorsed by the American Academy of Pediatrics ("AAP").[6] WPATH is the leading association of medical and mental health professionals with expertise in the treatment of transgender individuals. The AAP is an association representing more than 67,000 pediatricians. The Endocrine Society is an organization representing more than 18,000 endocrinologists. These groups represent the largest professional associations in these fields of medicine in the United States.

26. The precise treatment for gender dysphoria depends on each person's individualized need, and the medical standards of care differ depending on whether the treatment is for a pre-pubertal child, an adolescent, or an adult.

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[4] Coleman, E., *et al*. Standards of Care for the Health of Transgender and Gender Diverse People, Version 8, International Journal of Transgender Health, 23:sup1, S1-S259, DOI: 10.1080/26895269.2022.2100644. *Available at* https://doi.org/10.1080/26895269.2022.2100644 (hereafter, "WPATH SOC 8").

[5] Hembree, W.C., Cohen-Kettenis, P.T., Gooren, L., *et al*. Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *The Journal of Clinical Endocrinology & Metabolism*. 2017; 102(11):3869- 3903 (hereafter, "Endocrine Society Guideline").

[6] *See, e.g.*, Rafferty, J., Committee on Psychosocial Aspects of Child and Family Health, Committee on Adolescence and Section on Lesbian, Gay, Bisexual, & Transgender Health and Wellness. Policy Statement: Ensuring Comprehensive Care and Support for Transgender and Gender Diverse Children and Adolescents. Pediatrics. 2018; 142(4):2018-2162, at *6. *Available at*: https://pediatrics.aappublications.org/content/142/4/e20182162.

27. Treatment for gender dysphoria is aimed at eliminating the clinically significant distress a patient experiences by helping the patient live in alignment with their gender identity. This treatment is sometimes referred to as "gender transition," "transition-related care," or "gender-affirming care."

28. All major medical professional groups in the United States, including the AAP, the American Medical Association, and the American Academy of Child and Adolescent Psychiatry, agree that this care is safe, effective, and medically necessary treatment when clinically indicated for the health and wellbeing of children and adolescents suffering from gender dysphoria.[7]

29. The Endocrine Society Guideline was developed through a rigorous scientific process that "followed the approach recommended by the Grading of Recommendations, Assessment, Development, and Evaluation group, an international group with expertise in the development and implementation of evidence-based guidelines."[8] The Endocrine Society

[7] Rafferty, J., Committee on Psychosocial Aspects of Child and Family Health, Committee on Adolescence and Section on Lesbian, Gay, Bisexual, & Transgender Health and Wellness. Policy Statement: Ensuring Comprehensive Care and Support for Transgender and Gender Diverse Children and Adolescents. *Pediatrics*. 2018; 142(4):2018-2162. *Available at*: https://pediatrics.aappublications.org/content/142/4/e20182162; Beers, L.S. American Academy of Pediatrics Speaks Out Against Bills Harming Transgender Youth. *American Academy of Pediatrics*. 2021. *Available at*: https://services.aap.org/en/news- room/news-releases/aap/2021/american-academy-of-pediatrics-speaks-out-against-bills- harming-transgender-youth/; AACAP Statement Responding to Efforts to Ban Evidence- Based Care for Transgender and Gender Diverse Youth. *American Academy of Child & Adolescent Psychiatry*. 2019. *Available at*: https://www.aacap.org/AACAP/Latest_News/AACAP_Statement_Responding_to_Effort s-to_ban_Evidence-Based_Care_for_Transgender_and_Gender_Diverse.aspx; State Advocacy Update. American Medical Association. 2021. *Available at*: https://www.ama-assn.org/health-care-advocacy/advocacy-update/march-26-2021-state-advocacy-update.

[8] Endocrine Society Guideline at 3872.

Guideline instructs clinicians that patients with gender dysphoria often benefit from treatment with "a safe and effective hormone regimen that will (1) suppress endogenous sex hormone secretion determined by the person's genetic/gonadal sex and (2) maintain sex hormone levels within the normal range for the person's affirmed gender."[9]

30. The Endocrine Society Guideline for treatment of gender dysphoria is comparable to other clinical practice guidelines that I follow as a pediatric endocrinologist to treat other medical conditions such as those practice guidelines for Congenital Adrenal Hyperplasia (CAH) and Polycystic Ovary Syndrome (PCOS). These guidelines represent best practices for clinical management of various endocrine conditions based on the best available evidence, which is of similar quality to the evidence supporting the guidelines for treatment of gender dysphoria.

31. Before puberty, treatment for gender dysphoria does not include any drug or surgical intervention; prepubertal treatment may include "social transition," which means allowing a transgender child to live and be socially recognized in accordance with their gender identity.[10] This can include allowing children to wear clothing, to cut or grow their hair, to use names and pronouns, and to access restrooms and other sex-separated facilities and activities in line with their gender identity instead of the sex assigned to them at birth.

32. For many transgender adolescents with gender dysphoria, going through endogenous puberty can cause extreme distress. Pubertal suppression, known as GnRH agonists or GnRHa, allows adolescents with gender dysphoria to pause their endogenous

[9] Endocrine Society Guideline at 3869.
[10] Endocrine Society Guideline at 3877-79; WPATH SOC 8 at S39-40, 75-78.

puberty, thereby avoiding the heightened gender dysphoria and permanent physical changes that puberty would cause. This treat is reversible. It pauses puberty only for the duration of the treatment and gives a young person time to further understand their gender identity without the distress caused by the changes to their body that result from puberty and before initiating gender-affirming hormone therapy if it becomes medically indicated.

33. Pubertal suppression can be initiated up to mid-puberty and works by pausing endogenous puberty at the stage it has reached when the treatment begins. This has the impact of limiting the influence of a person's endogenous hormones on the body. For example, after the initiation of pubertal suppression, a girl who is transgender will stop experiencing the impacts of testosterone on her body for the duration of the treatment.

34. Under the Endocrine Society Guideline, transgender adolescents with gender dysphoria may be eligible for pubertal suppression if:

a. A qualified mental health professional has confirmed that:

   i. the adolescent has demonstrated a long-lasting and intense pattern of gender nonconformity or gender dysphoria (whether suppressed or expressed),

   ii. gender dysphoria worsened with the onset of puberty,

   iii. any coexisting psychological, medical, or social problems that could interfere with treatment (*e.g.*, that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start treatment,

   iv. the adolescent has sufficient mental capacity to give informed consent to this (reversible) treatment, and

b. The adolescent:

   i. has been informed of the effects and side effects of treatment (including potential loss of fertility if the individual subsequently

continues with sex hormone treatment) and options to preserve fertility,

ii. has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process,

c. And a pediatric endocrinologist or other clinician experienced in pubertal assessment:

i. agrees with the indication for GnRH agonist treatment,

ii. has confirmed that puberty has started in the adolescent, and

iii. has confirmed that there are no medical contraindications to GnRH agonist treatment.[11]

35. For some adolescents with gender dysphoria, initiating puberty consistent with gender identity through gender-affirming hormone therapy may also be medically necessary. When prescribed gender-affirming hormone therapy—testosterone for transgender boys, and testosterone suppression and estrogen for transgender girls—the adolescent will go through hormonal puberty consistent with their gender identity on a comparable timeline to their non-transgender peers.

36. Under the Endocrine Society Guideline, transgender adolescents may be eligible for gender-affirming hormone therapy if:

a. A qualified mental health professional has confirmed:

i. the persistence of gender dysphoria,

ii. any coexisting psychological, medical, or social problems that could interfere with treatment (*e.g.*, that may compromise treatment adherence) have been addressed, such that the adolescent's situation

[11] Endocrine Society Guideline at 3878.

and functioning are stable enough to start sex hormone treatment,

iii. the adolescent has sufficient mental capacity to estimate the consequences of this (partly) irreversible treatment, weigh the benefits and risks, and give informed consent to this (partly) irreversible treatment, and

b. The adolescent:

i. has been informed of the (irreversible) effects and side effects of treatment (including potential loss of fertility and options to preserve fertility),

ii. has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process,

c. And a pediatric endocrinologist or other clinician experienced in pubertal induction:

i. agrees with the indication for sex hormone treatment,

ii. has confirmed that there are no medical contraindications to sex hormone treatment.[12]

37. Before any medical treatment is initiated, the Endocrine Society Guideline and the WPATH SOC 8 provide that mental health evaluations should be conducted. The Endocrine Society Guideline specifies that mental health clinicians trained "in child and adolescent gender development (as well as child and adolescent psychopathology) should make the diagnosis, because assessing [Gender Dysphoria]/gender incongruence in children and adolescents is often extremely complex."[13] It further explains: "[i]n cases in which severe psychopathology, circumstances, or both seriously interfere with the diagnostic work or make

[12] Endocrine Society Guideline at 3878.
[13] Endocrine Society Guideline at 3876.

satisfactory treatment unlikely, clinicians should assist the adolescent in managing these other issues."[14] The Endocrine Society Guideline takes very seriously the importance of ongoing mental health evaluation for purposes of accurate diagnosis as well as effective treatment. Ideally, this evaluation is done with a team of individuals operating in their fields of expertise, including hormonal management and mental health assessment.

38. The WPATH SOC 8 make clear that mental health professionals assessing for a gender dysphoria diagnosis should, among other things, conduct a careful assessment of "any mental health conditions that could negatively impact the outcome of gender-affirming medical treatments,[] with risks and benefits discussed, before a decision is made regarding treatment"[15] The WPATH SOC 8 specifically recognize that "[transgender and gender diverse] adolescents are at increased risk of mental health challenges, often related to family/caregiver rejection, non-affirming community environments, and neurodiversity-related factors," and that "like cisgender youth, [transgender and gender diverse] youth may experience mental health concerns irrespective of the presence of gender dysphoria or gender incongruence."[16]

39. Under existing clinical guidelines and in my own clinical experience puberty-delaying medication and gender-affirming hormones are only provided after careful evaluation and where a patient is experiencing clinically significant distress related to consistent and persistent gender identification different from their assigned sex . Each stage of the treatment is carefully evaluated and can be changed at any time by carefully tapering a

[14] Endocrine Society Guideline at 3877.
[15] WPATH SOC 8 at S32.
[16] WPATH SOC 8 at S62.

patient off of the treatment. In the case of puberty blocking medication, once stopped, a patient's endogenous puberty resumes. With hormone therapy, once stopped, a patient's naturally occurring hormones will continue to circulate. Though some effects of hormone therapy can be irreversible depending on the duration of the treatment, such as facial hair growth in patients on testosterone, many others are reversible once the treatment is stopped.

40. There is not an assumption that certain treatments are appropriate for every patient. " Recognizing the diverse and heterogeneous community of individuals who identify as transgender and gender diverse (TGD)," the WPATH SOC 8 explicitly states that "gender-affirming surgical treatments may be categorized along a spectrum of procedures for individuals assigned male at birth (AMAB) and assigned female at birth (AFAB)."[17] The standards of care do not recommend rushing into medical treatment. The Endocrine Society Guideline provides that prior to the initiation of any medical treatment "[t]ransgender individuals should be encouraged to experience living in the new gender role and assess whether this improves their quality of life."[18]

[17] WPATH SOC 8 at S128.
[18] Endocrine Society Guideline at 3878.

PRACTICE AT DUKE GENDER CARE CLINIC

41. I am currently a provider to hundreds of adolescents with gender dysphoria at the Duke Gender Care Clinic.

42. When it is medically indicated for a transgender adolescent with gender dysphoria, I prescribe pubertal suppression starting at the Tanner 2 or Tanner 3 stages of puberty – never before. For people assigned male at birth, these stages of puberty are typically sometime between ages 9 and 14, and for people assigned female at birth, sometime between ages 8 and 12.

43. Where I first meet a patient that is further into puberty, in coordination with the Duke Gender Care Clinic's mental health providers, I assess the patient's individual medical needs. For all my patients under the age of 18, I require a referral letter from a mental health provider confirming the patient's gender dysphoria diagnosis. Depending on the patient's needs and the changes that have already been caused by their endogenous puberty, I either initiate pubertal suppression, and wait to initiate gender-affirming hormones until they are ready and it is medically indicated; or, for older adolescents, I initiate puberty consistent with their gender identity with gender-affirming hormones when a patient is ready and it is medically indicated.

44. The goal is to minimize the patient's gender dysphoria and initiate puberty consistent with gender identity within the typical age range, while also working with the patient and the patient's family to weigh the relative risks and benefits of each course of treatment. Protocols used to treat transgender youth with pubertal suppression do not put them outside of the typical age range for puberty. There is wide variability among adolescents of pubertal development and transgender adolescents with gender dysphoria who are treated with puberty delaying

treatment still undergo hormonal puberty (either endogenously if treatment is stopped or with gender-affirming hormone therapy) alongside their peers.

45. In my extensive clinical experience, I have observed the substantial benefits of pubertal suppression and gender-affirming hormones as treatment for adolescents with gender dysphoria. For some individuals, this treatment can eliminate or reduce the need for surgical treatment in adulthood.

PUBERTAL SUPPRESSION TREATMENTAND GENDER-AFFIRMING HORMONES ARE SAFE AND EFFECTIVE TREATMENTS FOR TRANSGENDER YOUTH

46. My clinical experience over 10 years is consistent with what has been documented through research, which is that, where medically indicated, the use of pubertal suppression and gender-affirming hormone therapy to treat adolescents with gender dysphoria is safe and effective.

47. Pubertal suppression began to be used in the United States to treat gender dysphoria around 2004, which is not considered recent in medicine. Beyond that, we have over 40 years of data on the impact of pubertal suppression treatment on children who undergo precocious puberty that we can apply to the transgender population. And for youth with gender dysphoria (as compared to those treated for precocious puberty), puberty is delayed for a much shorter period of time. Pubertal suppression medication is also used in adolescents and adults undergoing chemotherapy to preserve fertility and in patients with hormone sensitive cancers, like breast and prostate cancer, as well as for people with endometriosis.

48. From the more than 40 years of data that we have, there is no scientific evidence of short- or long-term negative effects on patients who receive pubertal suppression

treatment that would warrant avoiding this effective treatment, let alone banning it.

49. In a 2020 study published in *Pediatrics*, the official journal of the American Academy of Pediatrics, researchers concluded that "[t]reatment with pubertal suppression among those who wanted it was associated with lower odds of lifetime suicidal ideation when compared with those who wanted pubertal suppression but did not receive it. Suicidality is of particular concern for this population because the estimated lifetime prevalence of suicide attempts among transgender people is as high as 40%."[19]

50. As noted above, under the Endocrine Society Guideline, once an adolescent establishes further maturity and competence to make decisions about additional treatment, it may then be medically necessary and appropriate to provide gender-affirming hormone therapy to initiate puberty consistent with gender identity. For girls who are transgender, this means administering both testosterone suppressing treatment as well as estrogen to initiate hormonal puberty consistent with the patient's female gender identity. For boys who are transgender this means administering testosterone.

51. As a pediatric endocrinologist I provide the same types of treatments to people with intersex traits and cisgender people to affirm their gender identity that is prohibited by the medical care ban if provided to transgender people with gender dysphoria for the same reasons.

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[19] Turban, J.L., King, D., Carswell, J.M., *et al*. Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation. *Pediatrics*. 2020;145(2):e20191725, at *5; *see also* Wiepjes, C.M., Nota, N.M., de Blok, C.J., *et al*. The Amsterdam Cohort of Gender Dysphoria Study (1972–2015): Trends in Prevalence, Treatment, and Regrets. *The Journal of Sexual Medicine*. 2018; 15(4):582-590; De Vries, A.L., McGuire, J.K., Steensma, T.D., *et al*. Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment. *Pediatrics*. 2014; 134(4):696-704.

TREATMENTS FOR GENDER-AFFIRMING CARE ARE SIMILAR TO TREATMENTS FOR OTHER CONDITIONS

52. There is nothing unique about undergoing hormone treatment to sustain one's health; it is a common practice in many non-transgender patients for reasons unrelated to treatment of gender dysphoria. Many people with gender dysphoria have been on hormone therapy for decades and there is no evidence of any negative health outcomes that would outweigh the substantial benefit of the treatment. Likewise, many non-transgender individuals have to undergo hormone treatment for the majority of their lives, and it is well-managed.[20] This includes patients with various intersex conditions such as Turner syndrome and Klinefelter syndrome, premature ovarian failure, and cancer.

53. In addition to my patients with intersex traits, I regularly treat cisgender patients with the same hormone therapy that is provided to transgender patients. For example, cisgender boys with delayed puberty are often prescribed testosterone for delayed puberty. Without testosterone, for most of these patients, puberty would eventually initiate naturally but testosterone is often prescribed to avoid some of the social stigma that comes from undergoing puberty later than one's peers.

54. Likewise, cisgender girls with hypogonadotropic hypogonadism (delayed puberty due to lack of estrogen caused by a problem with the pituitary gland or hypothalamus)

[20] Asscheman et al., A long-term follow-up study of mortality in transsexuals receiving treatment with cross-sex hormones. *Eur. J. Endocrinol.* 2011 Apr;164(4):635-42. doi: 10.1530/EJE-10-1038.

may be treated with estrogen to initiate puberty. I also treat cisgender girls with Polycystic Ovarian Syndrome (PCOS) with hormonal birth control or testosterone suppression to reduce some symptoms of the condition including excess facial hair.

55. Similarly, a cisgender boy and a transgender boy could both seek surgery to remove breast tissue to help align their body or appearance with their gender.

56. As an endocrinologist, I regularly prescribe hormone treatment to my patients—cisgender and transgender—for various medical needs. The care is always individually calibrated to the individual, their baseline hormone levels, and their particular medical needs.

57. The legislative findings in the medical care ban also claim that "medical procedures that alter a minor's hormonal balance, remove a minor's sex organs, or otherwise change a minor's physical appearance… can lead to the minor becoming irreversibly sterile, having increased risk of disease and illness, or suffering from adverse and sometimes fatal psychological consequences." I am not aware of what these findings might be referring to, but the risks related to hormone therapy and puberty suppression generally do not vary based on the condition they are being prescribed to treat, and the same hormones are used for a variety of indications in addition to gender dysphoria. Additionally, these risks are much less likely when the treatment is prescribed and supervised by a clinician. When is obtained on the black market and not supervised by appropriate clinical providers, as with all medication, these risks increase dramatically.

58. Potential risks that may be present like potential impacts on fertility are extensively discussed with patients and families and all decisions are made on an individual basis weighing the risks and benefits.

59. One argument against gender-affirming medical treatment for transgender youth that is often raised is that the treatment is automatically sterilizing, but this is not accurate. Many transgender people (and cisgender people) undergo fertility preservation before any treatment that would compromise fertility. Many more transgender people may be treated with gender-affirming surgery that has no impact on fertility such as chest reconstruction. Pubertal suppression on its own has no impact on fertility. Hormone therapy can impact fertility but many transgender individuals conceive children after undergoing hormone therapy.[21] We also counsel our patients taking testosterone that it is not an adequate form of birth control and patients can still become pregnant while on testosterone. New techniques are also being developed to help transgender men preserve oocytes even while on testosterone.

60. Many medical treatments that are necessary to preserve a person's health and well-being can impact an individual's fertility, but patients regularly proceed with the treatment after giving informed consent. With other endocrine conditions, the impact of treatment on fertility may be unknown but patients are individually counseled and empowered to make decisions based on what is best for their overall health. For example, with treatment for Klinefelter's Syndrome, which is an intersex condition where a person's testicles

[21] Light AD, Obedin-Maliver J, Sevelius JM, Kerns JL. Transgender men who experienced pregnancy after female-to-male gender transitioning. *Obstet Gynecol*. 2014;124(6):1120-1127; Maxwell S, Noyes N, Keefe D, Berkeley AS, Goldman KN. Pregnancy Outcomes After Fertility Preservation in Transgender Men. *Obstet Gynecol*. 2017;129(6):1031-1034; Neblett MF 2nd, Hipp HS. Fertility Considerations in Transgender Persons. *Endocrinol Metab Clin North Am*. 2019;48(2):391-402; Stark BA, Mok-Lin E. Fertility preservation in transgender men without discontinuation of testosterone. F S Rep. 2022 Feb 9;3(2):153-156. doi: 10.1016/j.xfre.2022.02.002. PMID: 35789719; PMCID: PMC9250124.

eventually fail, some data suggests that testosterone treatment impairs fertility, while other data suggests that testosterone treatment improves fertility. Patients are counseled about the various risks and side effects before any treatment is initiated.

61. In contrast to care for transgender youth, which can always leave room for fertility preservation, many surgical treatments performed on intersex infants—which the medical care ban permits—would permanently impact fertility.

62. The medical care ban's suggestion that gender-affirming care is associated with adverse and sometimes fatal psychological consequences is incorrect. It is *withholding* this care that can be associated with fatal consequences, not providing it.

63. All medical treatment comes with risk, and there can be side effects with any medication. In the case of medical treatment for gender dysphoria, decades of research and clinical experience have shown that the risk of adverse side effects from either pubertal suppression treatment or hormone therapy is low and it is greatly outweighed by the benefits of the care.

64. In my field of medicine, there are many examples of treatment that we provide even where the side effects can be very significant. As just one example, there are certain injectable medications used to treat Type 2 Diabetes that can cause severe gall bladder inflammation. I have had multiple patients who have needed their gall bladders removed as a result of this treatment, but this care is still provided because the benefits outweigh even these severe potential risks. In addition, many individuals are using medications in the category of GLP-1 agonists like liraglutide, dulaglutide, exenaglutide, and semaglutide for Type 2 Diabetes and weight loss. These medications also have been shown to cause pancreatitis, which can be deadly, and these are some of the most commonly requested

medications for weight loss today. Finally, insulin, which is a lifesaving drug and required for life for those with Type 1 Diabetes, can have severe and deadly side effects if not used in a very careful manner. Severe hypoglycemia or low blood sugar can lead to seizure, coma and death in a very short period of time with doses in excess of need.

65. In sum, the medical treatments described above are safe, effective and essential for the well-being of many transgender young people. My patients who receive medically appropriate treatment for gender dysphoria experience significant improvement in their health. Medical treatment recommended for and provided to transgender adolescents with gender dysphoria can substantially reduce lifelong gender dysphoria and can eliminate the medical need for surgery later in life. Providing gender-affirming medical care can be lifesaving treatment and can improve the short- and long-term health outcomes for transgender youth.

HARMS OF WITHOLDING OR TERMINATING TREATMENT FOR TRANSGENDER YOUTH WITH GENDER DYSPHORIA

66. Withholding pubertal suppression and hormone therapy from transgender young people when it is medically indicated is extremely harmful. As noted above, administration of pubertal suppression has shown to be associated reduced distress in patients with gender dysphoria. If I was prohibited from treating my patients with this treatment where it is medically indicated, it would result in predictable and significant harms, including, at least, the partially irreversible changes from endogenous puberty described below.

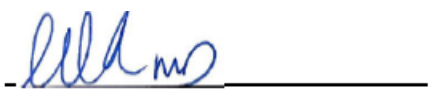
67. The goal of treatment for gender dysphoria is to reduce the distress associated with the disconnect between a person's assigned sex at birth and their gender identity. Denying pubertal suppression treatment and gender-affirming hormones to a transgender adolescent

who needs the treatment will not cause the adolescent to stop being transgender. It will only cause the minor to experience distress from lack of treatment.

68. From a medical perspective, it is at least as dangerous to withdraw treatment once it has been initiated as it is to withhold the initiation of treatment. If a clinician is forced to stop pubertal suppression as a result of a legal prohibition on the medical treatment, it will cause patients to resume their endogenous puberty. This could result in extreme distress for patients who have been relying on pubertal suppression to prevent bodily changes that come with their endogenous puberty. For a girl who is transgender, this could mean that she would immediately start experiencing genital growth, body hair growth, deepening of her voice and development of a more pronounced Adam's apple. This can lead to a life of increased risk of being easily identified and targeted for being transgender. This puts them at risk for discrimination, harassment, and death. For a boy who is transgender, this could mean that he would have the initiation of a menstrual cycle and breast growth. This could lead to the need for a mastectomy that could have otherwise been avoided. These changes can be extremely distressful for a young person who had been experiencing gender dysphoria that was then relieved by the initiation of pubertal suppression. Many people may progress to self-harm and experience suicidality when their dysphoria worsens due to discontinuation of their gender affirming hormones.

69. Additionally, the effects of undergoing one's endogenous puberty may not be reversible even with subsequent hormone therapy and surgery, thus exacerbating lifelong gender dysphoria in patients who would have this treatment withheld or cut off. Bodily changes from puberty as to stature, hair growth, genital growth, voice and breast development can be impossible or more difficult to counteract.

70. If I had to pull my patients off treatment without medical indication, even for a short time, I would be concerned that some could become so traumatized they would resort to self-harm and potentially even attempt suicide. To take them off mid-treatment where the treatment is working could be life-threatening.



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